#### What this University needs is...



A present problem at Sir George is obtaining sufficient academic space - that is class-rooms and faculty offices.

Expansion over the last three years has seen classrooms become labs, closets and corridors transformed into offices, and offices converted to classrooms. There has also been a steady decrease in the amount of lounge space available to students, to the point where they are now using the hallways and stairwells for this purpose. A survey of three major Quebec universities shows that Sir George has the least amount of academic space per full-time student, a figure that is vividly demonstrated in the corridors and lecture rooms each day.

And the question remains in the mind of many "How long can this overcrowding continue? When will we have more space?"

James Joyce recently questioned J.-P. Pétolas, Director of Planning, about the situation for "Can you all hear at the back?" Here is what was said:

I believe, Professor Pétolas, that you have two plans to help alleviate the space problem. Could you go into these in some detail?

There are short and long-range plans. The short-range plan is forced on us because of a situation at Sir George we are all familiar with, namely that with about half a million square feet of space - net space, non-residential space - we have pretty close to 6,000 students, which gives us a space ratio of 91 square feet per student. Norms in the province of Quebec are around 120. So it's very urgent for us to obtain permission from the Department of Education to bring our space factors up to an acceptable level. In order to do this quickly, there's only one way and this is to rent space. According to figures I have just mentioned we could rent over 100,000 square feet of space. I doubt very much that we will be able to do that in one single year but perhaps if we think of a shortrange plan of three or four years, we might be able to obtain this kind of space.

Two points on that. Will we definitely be able to rent this space? Will this permission for rental be forthcoming from the government?

I'm very optimistic on that.

Will this space be around the Hall Building or will it be around the Norris Building?

It is our intention to maintain this space around the Hall Building, depending on

what is available on the market. In no way, though, will we go further than walking distance, given for the outer limit the distance between the Norris and the Hall Building. It is our hope to be much closer than that.

Is this space to be used for Arts classes as opposed to Commerce or Engineering Faculties?

Probably so. The Faculty that requires the most amount of space, the Faculty that has been the most severely compressed, is the Arts Faculty. The other Faculties, especially Science and Engineering, are reasonably well installed in the Hall Building, though they too are short of space. However, the acuteness of the problem is not as great there as it is in Arts and even in Commerce.

Let's go into the second plan now, which I believe is a long-range plan over a span of approximately five years.

That's right. Renting is an expensive way of furnishing space for the University. It is much more efficient and economical to be able to build your own buildings and occupy them as the need arises. However, it takes at least four years before you start drawing sketches to the time you open the front door of a new building. So that if we started, say, in the 1970-71 academic year to plan our future construction buildings wouldn't be ready for us until the 1976-77 year. Our long-range plans include construction of a major structure around the Hall Building, basically north of the Hall Building

and also west, on Mackay Street. Buildings that we own presently - they are old houses - will be demolished and a modern, efficient high-rise structure would replace them.

What would the function of this building be?

The function will be mainly to house large, adequate library facilities - much extended library facilities - as well as academic facilities, mainly in the Faculty of Arts, and Commerce.

Can we then definitely say that there will be a library building and a combination Arts Faculty building within the next five years?

I think we can say that; I can't be quite as certain as you are. We have made representation to the Department of Education; we have proven the case of why we need these things. I think I can be sure we will have a building eventually, but I am not quite as sure as that as far as the timing is concerned. The government, of course, is aware of our needs, but the government has also many other needs and other priorities to fulfill besides our own. But we do get a fair hearing and if the economic position of the province can warrant it I'm sure we will be back in construction in a very short while.

What are the other projects planned for this long-range?

We've just talked about the academic

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Financial aid: Irwin Litvak discusses new campaign on page 3;

**Mathematics revolution:** Prof F.W. Bedford explains teachers program on page 2.

buildings. We are also planning a residence and this can be very soon.

By very soon you mean...

Well, maybe by next year we will be well under way in our program. The reason we can be more optimistic with the residence at the present time is that financing residences comes from the Quebec Housing Corporation and is independent of the method of financing the academic buildings. Then we have another major structure on our plans, and this is a physical education and University center. Such a building would also be a large structure and is extremely needed in this institution as we have nothing in that type of facility.

What will be the completion date on this structure?

Again, we hope to have all that complete by the end of the decade, but whether our schedule will be maintained or not will depend a lot on the Department of Education.

Another problem, that seems to be bothering a lot of students, is that of lounge space.

Yes, I agree with you there.

When the Hall Building opened in 1966, there were three fairly well-equipped lounges, of which there is now one.

That's right.

continued on page 2

#### A Sir George first...

# Teaching Math Teachers Math

"Sir George has lit the spark," Professor F.W. Bedford said, in revolutionizing mathematics teaching. The director of the Master in the Teaching of Mathematics program went on to explain.,

About five years ago, Bedford and fellow faculty in the Mathematics department realized the need for better training in the subject, the need made more evident still to Bedford through his connection with the Quebec Association of Mathematic's Teachers.

"Many high school teachers here have studied no more than freshman math," Bedford said, and the math they have learned is now being taught in the secondary schools. Just as the "new math" that was initiated in the universities has now filtered down to the schools.

Bedford said that the school boards had made inadequate preparations for the introduction of the new math in the schools. "It's not the fault of the teachers," he said. A number of in-service training programs were started to brief teachers but these are only partially the answer

"We hope to go out of business," he said referring to Sir George's monopoly on preparing undergraduates for the masters program. Bedford said that he hoped that the new amalgamation of St. Joseph's Teachers College and the Macdonald Faculty of Education would take on the responsibility of teaching the five prerequisite courses, as he hopes all normal schools and colleges of education will do.

Bedford stressed that a distinction must be made between MSc programs offered in math in universities like Toronto where the emphasis in a large part is turning out mathematicians. He said that the purpose at Sir George was to give a "general-general" overview of the subject to teachers of mathematics. However, teaching method is not included in the program since all candidates are practising teachers.

The spark seems to be catching on. Already, universities in the province are approaching Sir George for information and guidance in setting up their own programs. "The University of Quebec will



Prof. F.W. Bedford directs the Master in the Teaching of Mathematics program.

What this University

needs is...

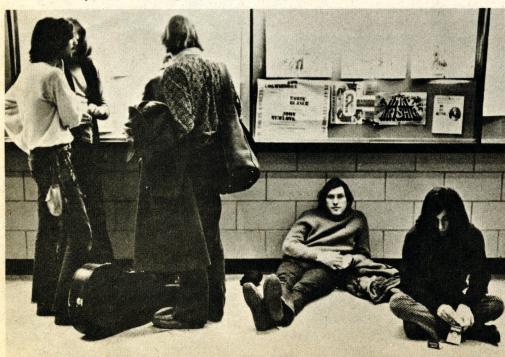
Was this a move of the Planning Office, was this a result of their policy?

This was really not a move or a plan of the Planning Office. A utilization survey of those rooms was conducted and showed that neither the men's nor women's lounge was used to a very great extent. On the other hand, student government had an extreme case of crowding on the third floor and had to expand. The studies were done by the student government.

continued

And student government were the people who wanted the lounge space?

That is correct. On the other hand you have probably noticed that there has been an effort in the last years to include more seating facilities in the wider corridors and also in the indoor campus. That is space that is very lightly used for that, and perhaps we have to do more to increase the seating on the indoor campus and the wide corridors, the few that we have left



offer a similar program and we've sent off material to the University of Sherbrooke as well as universities outside the province such Saskatchewan," he said.

Bedford recalled his own experiences with his son who was trying to grapple with the new mathematics. "My son would come to me with problems where often the teacher's solutions were erroneous, so I would write to the teacher again and again to explain what was wrong," he said, "and today I'm head of the PTA group at the school. I've been involved with in-service training programs in several parts of the city," he said.

The Mathematics department obtained information about the MTM program through its counterparts in American universities and through recommendations from the Mathematical Association of America. There are about 100 universities in the U.S. which offer similar programs, 15 of which have PhD courses.

The Mathematical Association of America suggested 10 math courses beyond the freshman level and Sir George settled on offering five at each undergraduate and graduate level. The unergraduate or "qualifying" courses include calculus, vector analysis and series, algebraic structures and linear algebra, statistics and intermediate analysis. Graduate level courses include algebra, non-Euclidean geometry, real and complex analysis, a history and problem-solving seminar and in addition two half courses, mathematical logic and numerical analysis. Students in some cases may substitute some of these courses for more advanced ones or select a number of alternatives. The program also requires students to prepare a thesis.

The courses are offered in the early evening, each course meeting once a week for a thirty week period. The part-time student may carry two courses during the winter session and one and a half during the summer period.

"At present," Bedford said, "we have 89 students taking the graduate level courses and a very large number taking the undergraduate qualifying courses." Of the 89, almost a third come from the French secondary schools and CEGEPS. "We also have several who commute from Cornwall," he said.

The director said that the surprisingly large percentage of French students come to Sir George because of the unique nature of the MTM program. At Université de Montreal, he said, the graduate programs were designed to train mathematicians, not teachers of mathematics. In the case of the Ontario students, he said, the situation was the same in that the universities did not offer general courses for teachers.

So far reaction to the new program has been favourable. One of the 12 students who graduated last year summed up the general feeling of the group: "I think that the idea of giving academic courses for this type of degree rather than pedagogical or psychological courses, is excellent," he said. The student went on to point out an additional advantage to those who take the course and said that besides giving teachers a better background for dealing with subjects that they teach, "it opens up many areas where our interest might cause us to study deeper."

Bedford ended on a distant note: "It may take 15 to 20 years to complete the cycle before all teachers are adequately prepared to teach mathematics. It's a big job," he said.

#### Government & Business Campaign

### HOPES RISE FOR MORE FINANCIAL AID

Financial Aid Officer Dave Ramsay and Students' Association External Vice-President Irwin Litvack plan a double-headed campaign to boost fledgling funds for student loans and bursaries.

Litvack described present circumstances as a "general crisis throughout the province brought on by Quebec's drastic cuts in loans and bursaries this year. "On the 4th, 5th and 6th of February," Litvack said, "Dave Ramsay and myself are going to Quebec City to go before the Financial Aid Committee of the Department of Education." The financial aid group at Sir George will also seek money from large corporations, according to the SA executive who confirmed that the Board of Governors had given permission for campaign representatives to approach industry.

Referring to the forthcoming talks with Department of Education officials, Litvack said that he thought that Sir George would be "pleasantly surprised" with the outcome of the three day session. "Quebec is encouraged by our initiative," he said, "most universities just put the loan revision lists in their lap without complementing this with any form of personal contact with the Department. This is the first time that a university has made a personal representation concerning student loans and I think the students will be rewarded as a result."

#### Alternative procedure suggested

The standardized loan application, Litvack said, didn't call for further information concerning the a student's need for financial aid. After the external vice-president pointed out the difficulty of this form of computerized loan system, he suggested an alternative and perhaps more proficient way of dealing with the problem: "The applicant should be interviewed during the summer by the revision committee at Sir George, so that his case can be looked at on an individual basis. So the student would make his application to the financial aid office here at the University. The loan committee would then have to be a standing committee." The process at present involves the student obtaining a stamp certifying that the applicant is a student and forwarding the form to Quebec City. Revised applications include recommendations from the financial aid officer, although according to Litvack, the effect of the recommendation seems to be negligable.

The campaign organizers hope to satisfy Quebec officials that students need a range of financial aid from \$150 to \$1,500, basing their argument on both family circumstances and the students failure to secure summer employment. "As evidence," Litvack said, "we're going to bring up the four or five unsuccessful job applications that individual students have filled out as well as evidence of family need." Litvack said that the University would try to define "exceptional circumstances" such as death in the family and injury or sickness which prevent families from paying for students' education.

#### Quebec says jobs available

"Quebec's attitude," he continued, is that it's possible for anyone to get a job if the individual really wants one. They want to see you make an effort even if the job pays only \$40 or \$50 a week." The external vice-president said that Quebec City officials believe that many students refuse to look for employment beyond the higher paying jobs.

Litvack said that the Department of Education's loan policy at present is based on a subsistence living figure of \$1,550 for the Arts student during the academic year. The Department assumes that this amount will be complemented by "parental gifts" such as room and board.

Referring to students who do not receive assistance from their medium or higher income families, Litvack said: "We don't want to cheapen the campaign with these requests. These people have legal recourse and Quebec City expects these students to go through legal channels. We're going to Quebec to do the best for the greatest number of people and those students come from families which can't afford to send their children to university," he stressed.

The SA executive discounted the argument that Sir George could gain any ground with the student aid committee in Quebec because of the University's poor financial position compared to McGill and other English language universities. "The Department of Education deals of course with the French language institutions and I would think that we're perhaps a wealthier school in terms of student enrollment," he pointed out.

Litvack said that he hoped to raise \$40,000 through talks with the Department of Education at the early February meeting.

#### Help from industry to be sought

Returning to Sir George's proposed campaign for funds from private industry, Litvack pointed out that the Loan Committee of the University had still to give its approval of the project, although Litvack admitted that organizers were already past the tough hurdle in gaining Board of Governors' permission.

"Many corporations give grants to McGill and Loyola," Litvack argued," while Sir George has never even applied for aid in this area. We see this financial aid as complementary to the loans and bursaries that we will obtain from Quebec."

Until two weeks ago, emergency loans had to be stopped because of depleted funds. An \$8,500 surplus from last year's Student Services budget was put into the fund to start up the service which Litvack feels will probably last out the year. The bank makes \$3 available for every \$1 that the fund has on account, now making over \$25,000 available to students. Within the present loan restrictions, loans usually do not exceed \$200 and must be paid within 90 days.

The external vice-president said that he would like to see more loans available for a greater period. "If we're successful in Quebec and with industry," he concluded, "we should have a fantastic amount".

#### International Institute of

#### Quantitative Economics Opens

A conference on research priorities in quantitative socio-economic development planning inaugurated the International Institute of Quantitative Economics last weekend.

The Institute at 1550 de Maisonneuve West has been established under the joint sponsorship of Sir George and Ecole des Hautes Etudes Commerciales. The Director is SGWU Professor, M. Inagaki; Associate Director is Professor Marcel Dagenais of HEC.

Primary objectives of the IIQE are to initiate, organize and implement major quantitative research projects in the field of applied economics, activities intended to stimulate the international collaboration

of scholars. Particular emphasis will be given to problems of the developing countries.

The international orientation of the IIQE is reflected by the composition of its Council of Advisors. Chairman of the Council is Professor Jan Tinbergen of the Netherlands who was recently awarded the first Nobel Prize in Economics. Other Council members who participated in the inaugural conference included Chedli Ayari, newly-appointed Tunisian Secretary of State of Planning, H. Kitamura, former research director of the U.N. Economic Commission for Asia and the Far East (ECAFE), and Professor R. Eckaus of MIT.



Jan Tinbergen, recent winner of the first Nobel Prize in Economics, speaks at the IIQE opening.

#### Athlone winners

Three fifth-year Sir George engineering students have been awarded Athlone Fellowships.

They are Alex Barnett (mechanical) Jaleel Hasan (electrical), and Thomas Kontakos (mechanical).

The fellowship is for two years post-graduate study in Great Britain.

#### **Bookstore Tenders Wanted**

Tenders have been invited for the operation of the Sir George Williams University bookstore beginning June 1, 1970.

Tenders will be accepted until February 15, 1970. The bookseller will operate on an autonomous basis. Selection will not be made according to financial considerations only, but on the basis of features which will guarantee proper service to the University community.

Correspondence should be addressed to Mr. Henry G. Worrell, Controller, Sir George Williams University, 1435 Drummond Street.

#### **LETTERS**

Sir:

Your issue of January 8, 1970 contains some interesting items. A letter from Neil Compton puts the bookstore question into perspective. A report announces the acceptance of Jack Silver's resignation. Dr. Calvin Potter explains the mysteries of the SGWU financial statement.

Toward the end of the financial statement review in the paragraph headed "Small operating deficit" Dr. Potter praises the university for the low level of its deficit which "is within approximately 1 per cent of total revenue. Which evidences a high level of skill in financial management." The actual deficit in operating expenses is 2.5 per cent and Dr. Potter explains the difference by saying that the excess over 1 per cent is a non-recurring expense. But as far as the financial statement is concerned the deficit is 2.5 per cent.

The financial statement reveals that, in 1969, the bookstore increased sales and lowered expenses compared with 1968. The 1969 deficit is \$11,217.00 or 1.4 per cent of revenue. The deficit figures for 1968 are \$90,044 or 11.8 per cent of revenue. Under normal business circumstances increase in dollar sales coupled with a decrease in dollar expenses leading to virtual elimination of the deficit should call for kudos to the bookstore manager rather than the acceptance of his resignation. In fact I would say it "evidences a high level of skill in financial management."

Professor Compton makes the key point. It does seem unfortunate that the bookstore organization should now be disbanded when the financial statement indicates that it is overcoming its financial and operating problems.

Ronald P. Naylor
Science-Engineering Librarian

## THE WEEK AT SGWU

Send notices and photos of coming events to the Information Office, room 211 of the Norris Building, or phone 879-2867. Deadline for sumission is noon **Wednesday** for the following week's events.

#### MONDAY 26

EDUCATIONAL TECHNOLOGY: Lecture series continues with Dr. D. Ely, director of the Center of Instructional Communications at Syracuse University, on "Philosophy of Instructional Technology" in H-110 at 8:15 p.m.

CHANNEL 4: "Communications and Society" - a series of videotaped lectures by Prof. Charles Siepman, N.Y.U.; this week "Mass Communications Effects" at 10, 10.30 a.m., 2 and 2:30 p.m. through Friday; may be viewed in individual carrels located in H-523

"CAN YOU ALL HEAR AT THE BACK?": Michael Sheldon asks English profs George Bowering and David McKeen and Fine Arts prof Peter London whether creativity can be taught; University channel 9 at 10, 11 a.m., 1, 3 and 6 p.m. Monday through Friday.

FINE ARTS DEPARTMENT: Film showings from 1 to 2 p.m. in H-635; today "The Living Stone", "Alfred Pellan" and "In Search of Innocence".

SCIENCE WEEK '70: Opening ceremonies at noon on the mezzanine of the Hall Building; Dr. H. Enesco speaks to the Biology Club at 1 p.m.; movies at 2 p.m.; further information at 879-4526.

#### **TUESDAY 27**

GEORGIAN FILM SOCIETY: Last chapter of the year 2440 as seen in 1940 by spacedout Buck Rogers in H-110 at 1:15 to 2:15 p.m. with a selection of shorts of the period and door prizes; all for 25c.

FINE ARTS DEPARTMENT: Film showings from 1 to 2 p.m. in H-635; today "The Jolifou Inn", "Correlieu" and "The Painters of a Province".

HISTORY DEPARTMENT: Prof. M. Becker of the University of Rochester speaks on "Medieval Bibliography" in H-420 at 4:30 p.m.

SCIENCE WEEK '70: Exhibits from 10 a.m. to 8 p.m.; Biology Club movie at 1 p.m.; Science vs Engineering broomball game at 2 p.m.

#### WEDNESDAY 28

HOCKEY: McGill vs. Sir George at McGill, 8:00 p.m.

GEORGIAN FILM SOCIETY: Enter the Mini Film Festival - a series of Wednesday double features for 25c; "Night in Casablanca" with the Marx Brothers, and "Tarzan Triumphs" with Johnny Weissmuller in H-110 from 1:05 to 4 p.m.

FINE ARTS DEPARTMENT: Film showings from 1 to 2 p.m. in H-635; today "In Search of Media - The Art of Sylvia Lefkowitz", "Varley" and "Lismer".

SCIENCE WEEK '70: Businessmen-student luncheon at noon at the La Salle Hotel with speaker from Manpower and Immigration, \$2.50; Dr. A. Smith speaks to the Physics Club at 3:30 p.m.

#### THURSDAY 29

CONSERVATORY OF CINEMATOGRAPHIC ART: "Dracula" (Tod Browning, 1931), the original sound version with Bela Lugosi, at 7:00 p.m. in H-110; "Frankenstein" (James Whale, 1931), original sound version with Boris Karloff, at 9:00 p.m. (On evenings when two films are presented the price at 7 p.m. for both shows is \$1.00 for students, \$1.50 for non students - tickets will not be sold for the 7 p.m. show only; price for the 9 p.m. show only is 50c for students, 75c for non-students.)

GEORGIAN FILM SOCIETY: Start of the serial "Perils of Nyoka" with somebody called Kay Aldridge running around the jungle in skimpy outfits fighting villainess Vultura; also W.C. Fields in "Hurry, Hurry", Bert Lahr in "No More West", Charlie Chaplin in "Sparring Partner" and door prizes; all for 25c in H-110 at 1:15 to 2:15 p.m.

FINE ARTS DEPARTMENT: Film showings from 1 to 2 p.m. in H-635; today "Totems", "The World of David Milne" and "Paul-Emile Borduas".

SOCIOLOGY ANTHROPOLOGY DEPARTMENT: Stanford's Dr. Eric Voegelin on "The Theory of Revolution" in H-920 at 11:35 a.m.

SCIENCE WEEK '70: National Research council tour 8 a.m. to 6 p.m.; Night Out at the Scan, 8 p.m.

#### FRIDAY 30

UNIVERSITY COUNCIL: Meeting in H-769 at 2 p.m.

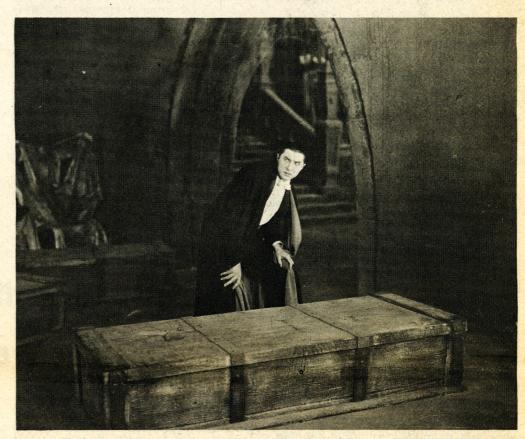
FINE ARTS DEPARTMENT: Film showings from 1 to 2 p.m. in H-635; today "Kurilek", "Third Dimension" and "Vaillancourt".

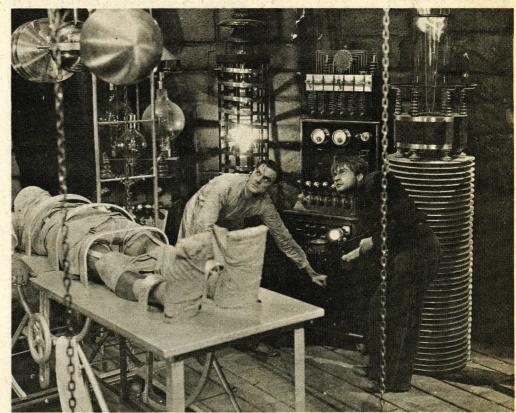
SCIENCE WEEK '70: Minister of Health and Welfare John Munro speaks on pollution in H-110 at 2 p.m.; the film "Grand Prix" in H-110 at 8 p.m. for 99c.

#### SATURDAY 31

BASKETBALL: Laval University vs. Sir George at McGill gymnasium, 5 p.m.

#### Plan Monster Rally





The Conservatory of Cinematographic Art presents the original versions of "Dracula" with Bela Lugosi and "Frankenstein" with Boris Karloff (under wraps) Thursday the 29th.

#### SGWU ISSUES & EVENTS

SGWU ISSUES & EVENTS is published weekly by the Information Office of Sir George Williams University, Montreal. The editorial offices are located in room 211 of the Norris Building, 1435 Drummond Street, Montreal 107, Quebec. Telephone 879-2867.

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